

NEBRASKA TECHNICAL NOTE

U.S. DEPARTMENT OF AGRICULTURE

NATURAL RESOURCES CONSERVATION SERVICE

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FORESTRY TECHNICAL NOTE NO. 63

ESTABLISHMENT GUIDE FOR CONSERVATION TREE AND SHRUB PLANTINGS

Establishing tree and shrub plantings in the Great Plains is usually more than a one year commitment. Certifying that trees/shrubs are planted does not mean they are established. Replanting, weed control, livestock exclusion, and animal damage control are necessary components in establishing tree/shrub plantings. Usually a minimum of 3-5 years of maintenance is needed after the initial planting to get the trees or shrubs off to a good start so they can adequately compete for available space. We have to consider the purpose for which the planting is intended in our establishment evaluation. Will the number of surviving trees/shrubs provide good wildlife cover, erosion control, livestock production, or adequate timber/firewood supply? Below are establishment guidelines that were developed to assist field staff in making tree/shrub establishment determinations.

Tree Planting (612), Wildlife Upland Habitat Management (645), Timber/Firewood/Scour Land (CP-3), Wildlife Plantings (CP-4), Filter Strip (CP-13), Bottomland Timberland Establishment on Wetlands (CP-14).

Criteria:

1. Tree/shrub plantings are considered established when survival for the entire planting is at least 70 percent of the desired stocking rate goal without any significant gaps or voids after three growing seasons.

Field Windbreak (392), Farmstead and Feedlot Windbreak (380), Hedgerow Planting (442), Field Windbreak (CP-5).

Criteria:

1. Tree and shrub plantings are considered established when:

- a) One - two row plantings - minimum of 90 percent survival overall at the end of the third growing season without any gaps that would deter the function of the windbreak according to the discretion of the inspector.
- b) Multi-row plantings (three or more rows) - after the third growing season, a minimum of 80 percent survival overall. If mortality is concentrated creating a significant gap, it is to the discretion of the inspector whether the gap would require replanting to maintain the integrity of the windbreak.

Procedure:

1. Certification for planting establishment should be performed no earlier than August of the third growing season after initial planting.
2. Replanting during the first three years should be discussed in the written plan or contract so the landowner is fully aware of the establishment objective the fall of the third growing season. An inventory of replanting needs during annual status reviews will help the landowner accomplish the establishment objective.
3. A random sampling procedure can be used, sampling 10 percent of the area or a minimum of 100 trees for smaller plantings (<1000 trees and/or shrubs.)

Example: 3,000 trees planted ($3,000 \times 0.10$) = 300 trees to be checked. 500 trees planted (500×0.10) = 50 trees; however, 100 trees need to be checked.

Suggested method: Distribute your sample plots throughout the planted area using linear plots by number of trees (e.g., checking survival of 10 trees or shrubs per linear plot.)

Example: 300 trees sampled, 10 trees checked per linear plot with 30 plots distributed throughout planting. The number of trees per plot would be variable with consideration given to getting a representative sample throughout the planting.

4. The inspector should use good professional judgement and be flexible in determining whether the planting is established and will serve the purpose for which it is intended.
5. Higher survival standards may be required on critical areas of a particular planting whether for timber, wildlife, or erosion control. Concentrated blocks of mortality may need to be replanted even though 70 percent overall survival has been attained if the function of the planting is greatly reduced. Flexibility is needed when blocks of mortality were caused by circumstances beyond the producer's control such as soil, planting design, or other site factors (e.g., calcareous soils, wrong tree or shrub species for soil, feedlot runoff.)

